

Client's ref.: 91201

Our ref: 0548-9823us/final/yyhsu/Kevin

ABSTRACT OF THE DISCLOSURE

A method of controlling the top width of a deep trench. A conductive layer is formed on the trench over a substrate of polysilicon with a recessed structure. An additional
5 layer of amorphous silicon (α -Si) is deposited onto the polysilicon. After subsequent oxidation, the amorphous silicon is converted to SiO_2 . According to the invention, the top width of a deep trench is controlled, protecting bit lines from sub-threshold leakage.